Figure 1 – Hardware Architecture

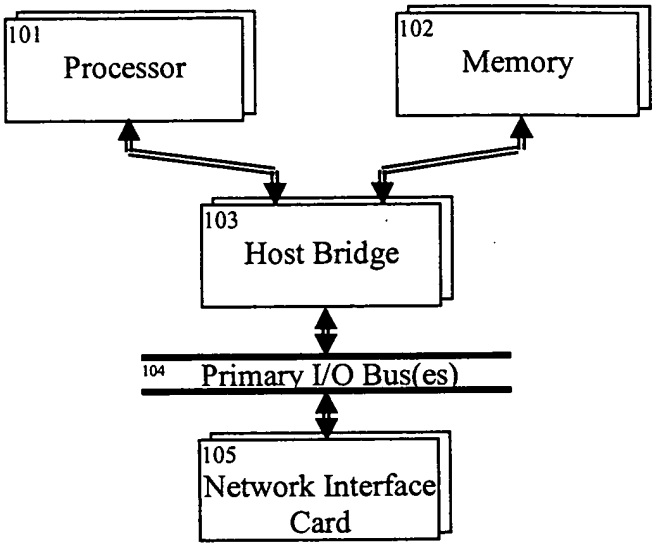


Figure 2 – NIC Hardware Architecture

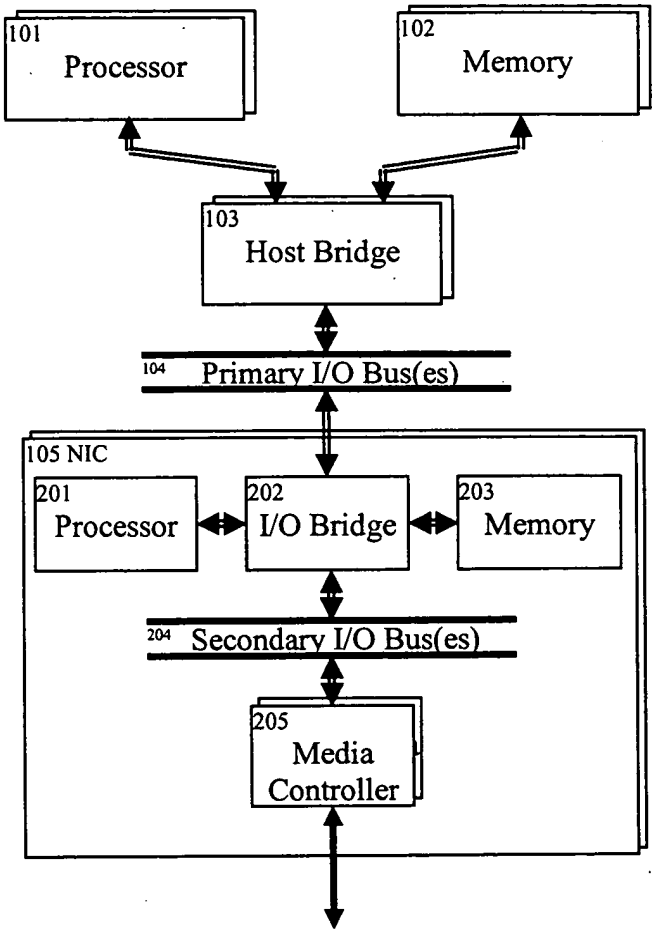


Figure 3 – Vito NIC Hardware Architecture

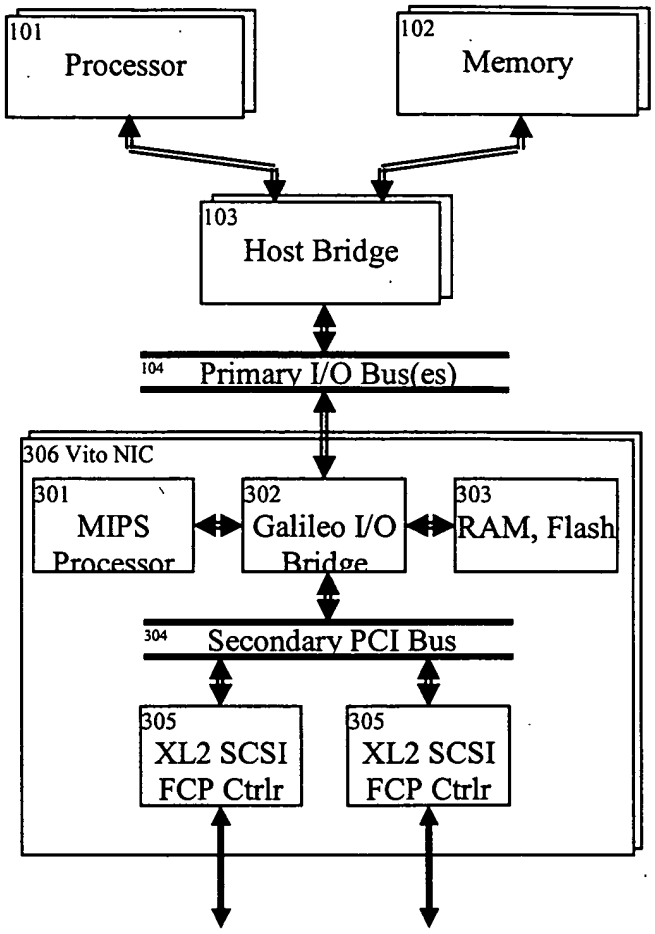


Figure 4 – Vito Software Architecture

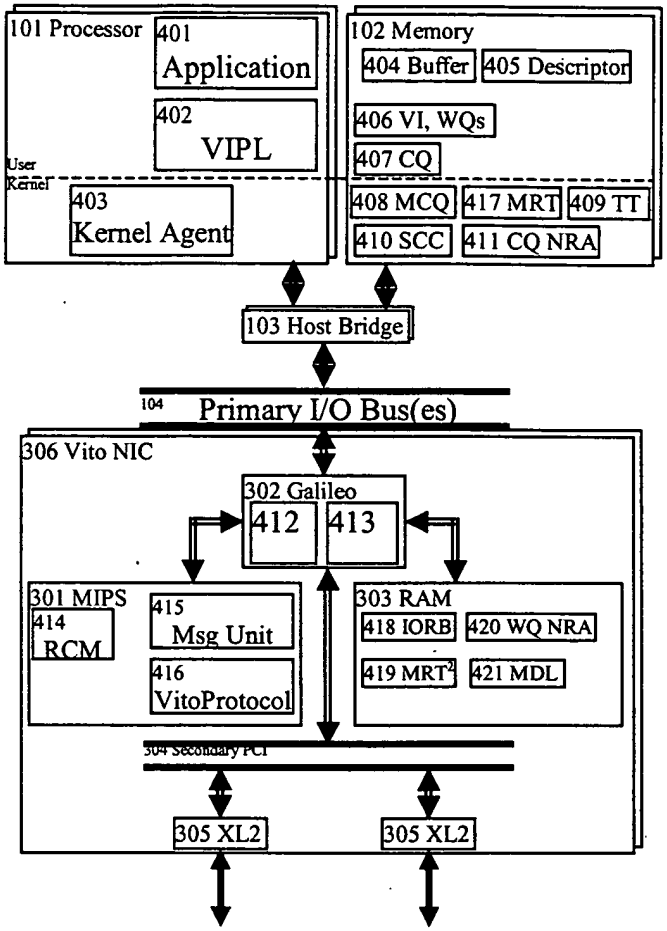


Figure 5 – Memory Registration Message Flows

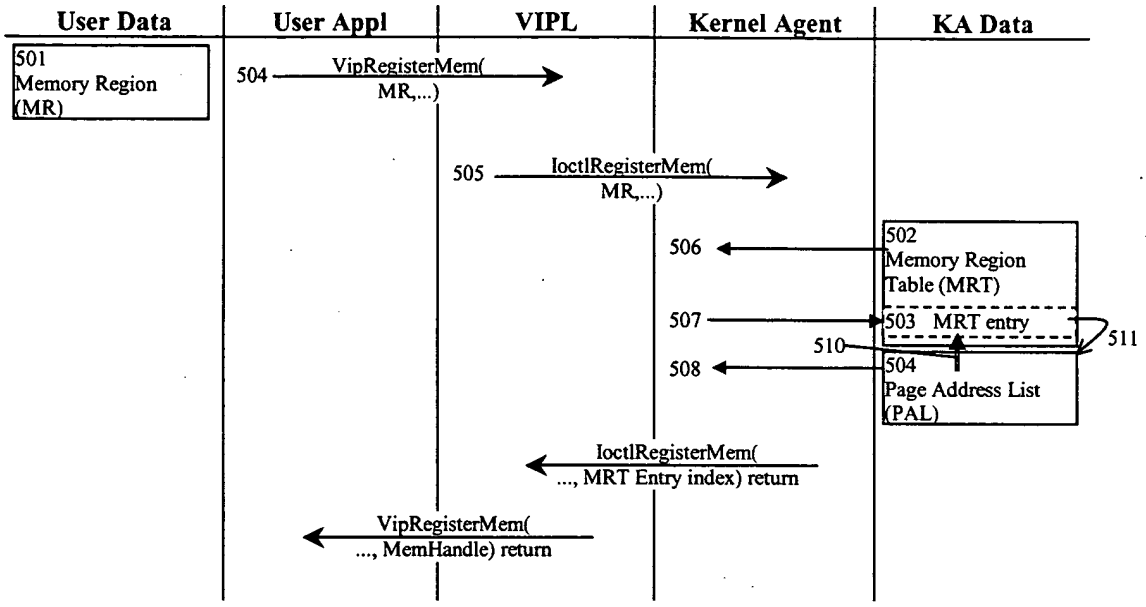


Figure 6 – Descriptor Posting Message Flows

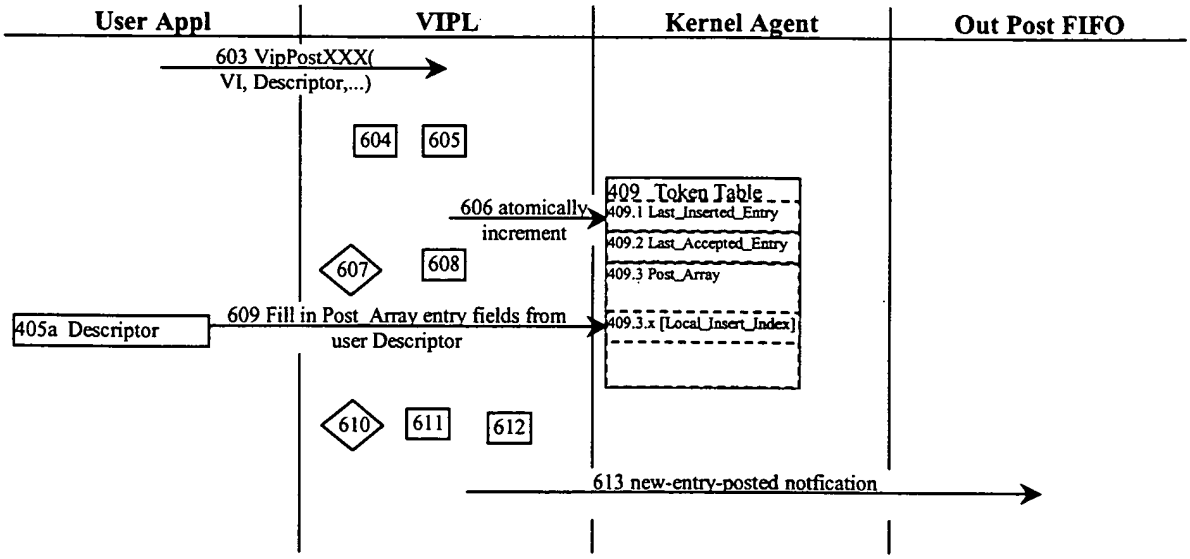


Figure 7 – Msg Unit Descriptor Processing Message Flows

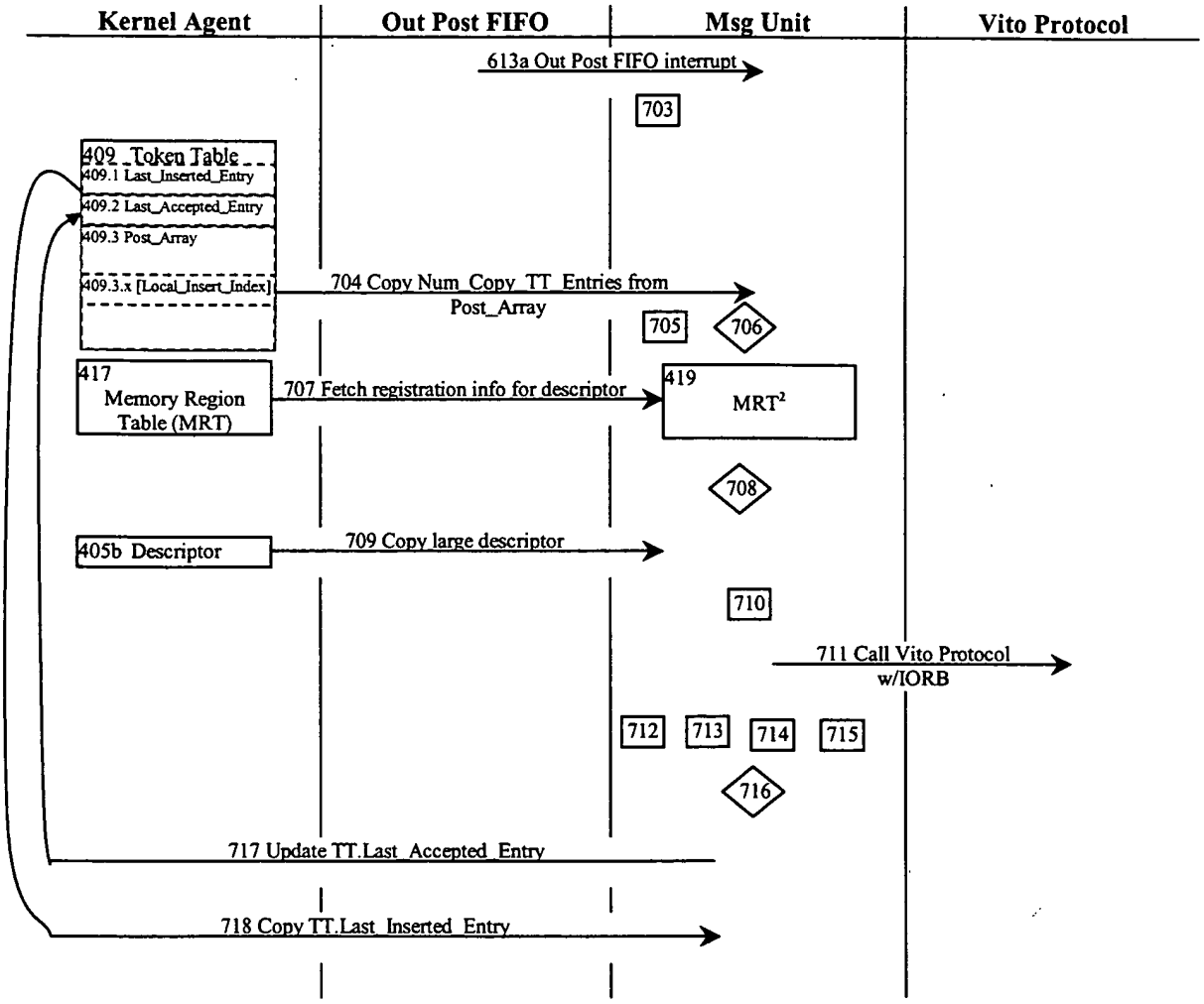


Figure 8 – Send Processing Message Flows

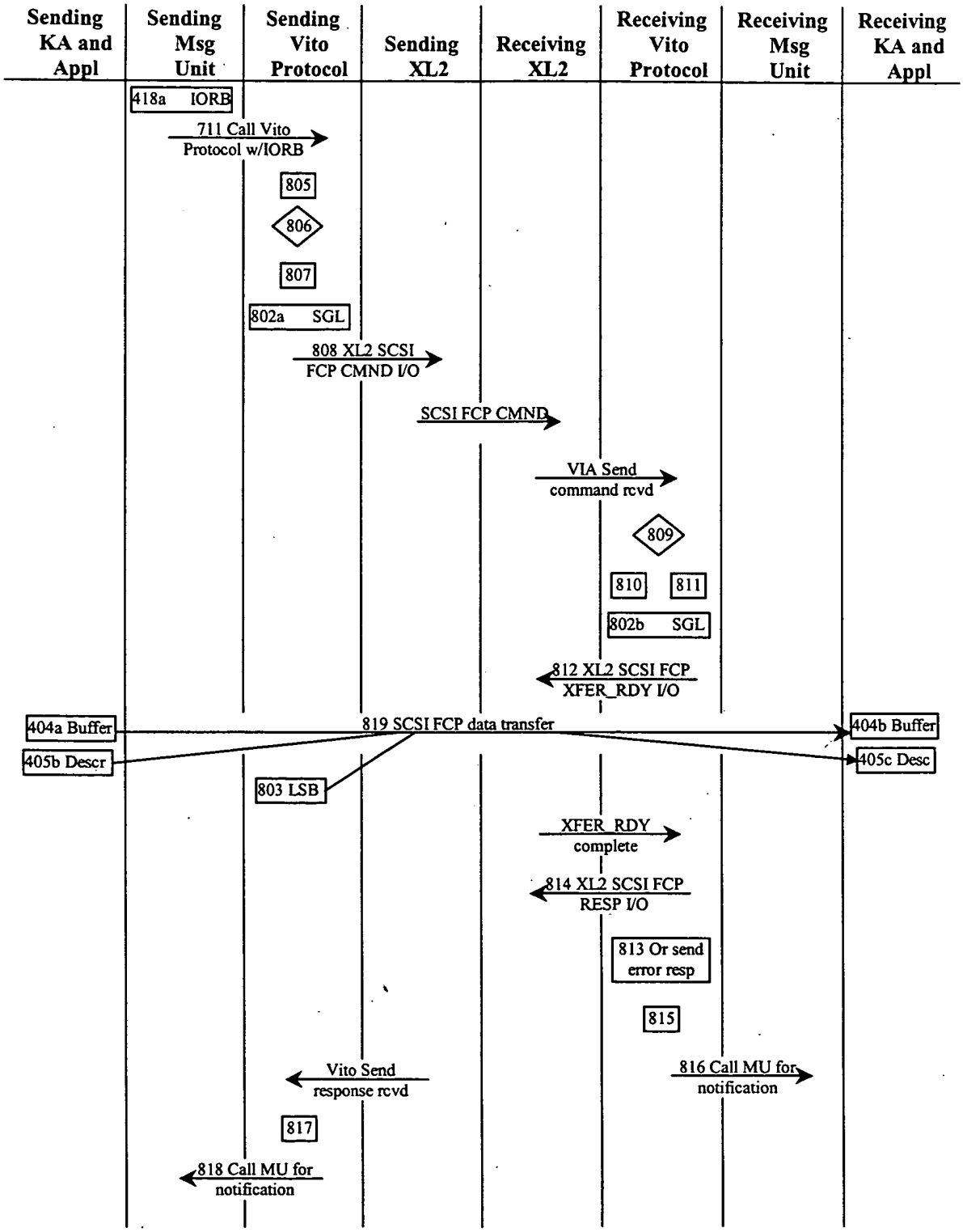


Figure 9 – RDMA-Write Processing Message Flows

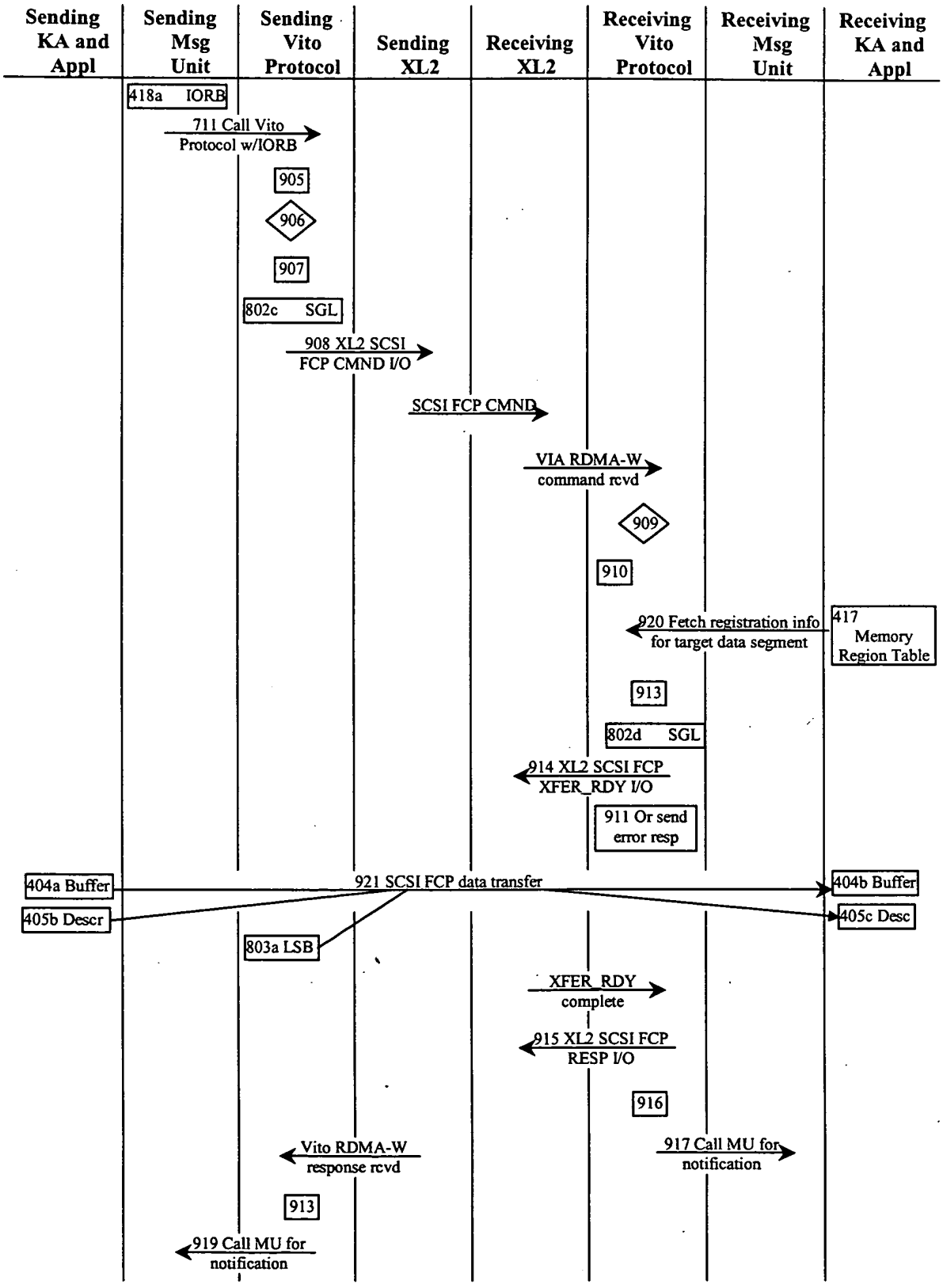


Figure 10 – RDMA-Read Processing Message Flows

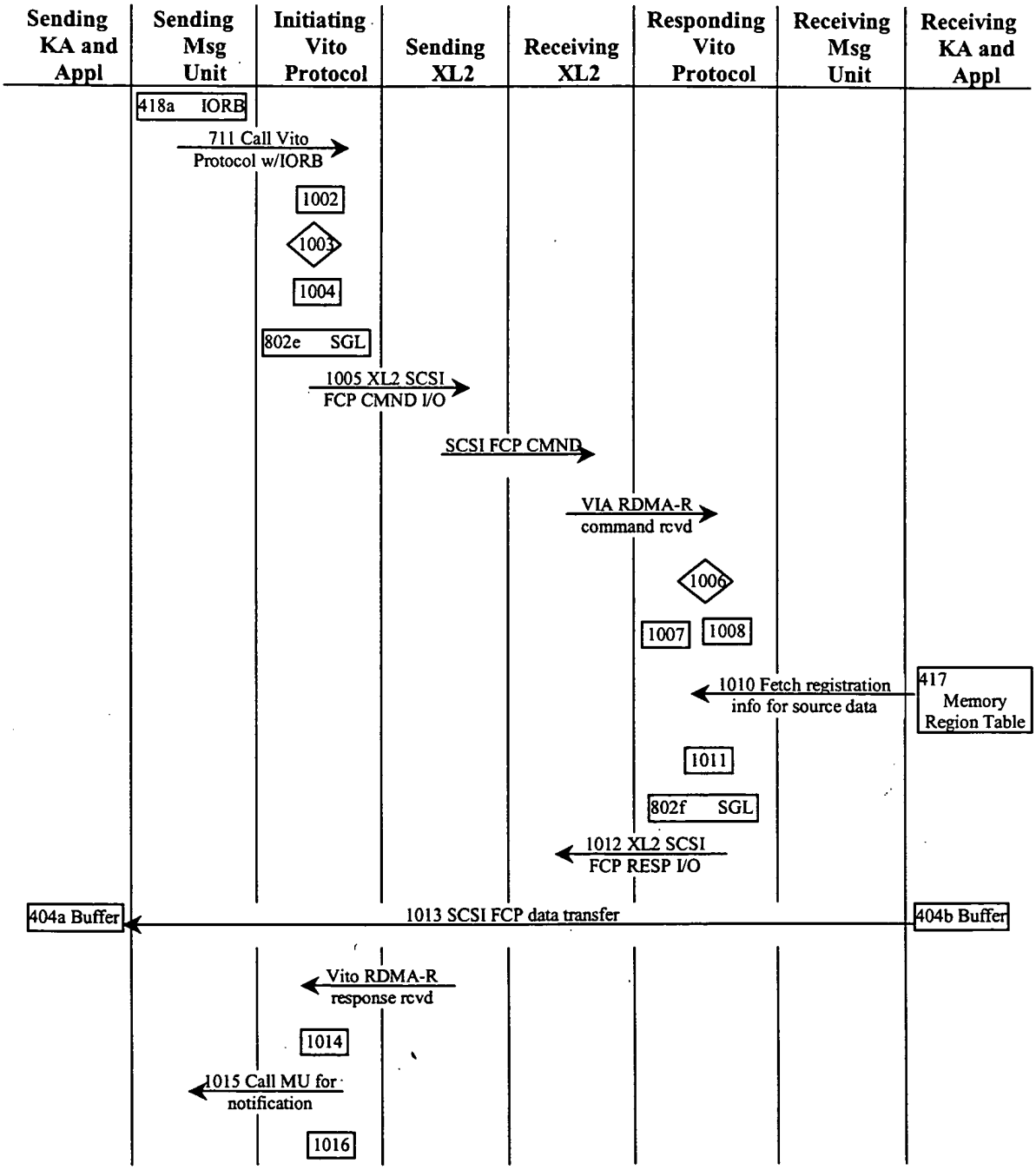


Figure 11 – Work Queue Completion Notification Message Flows

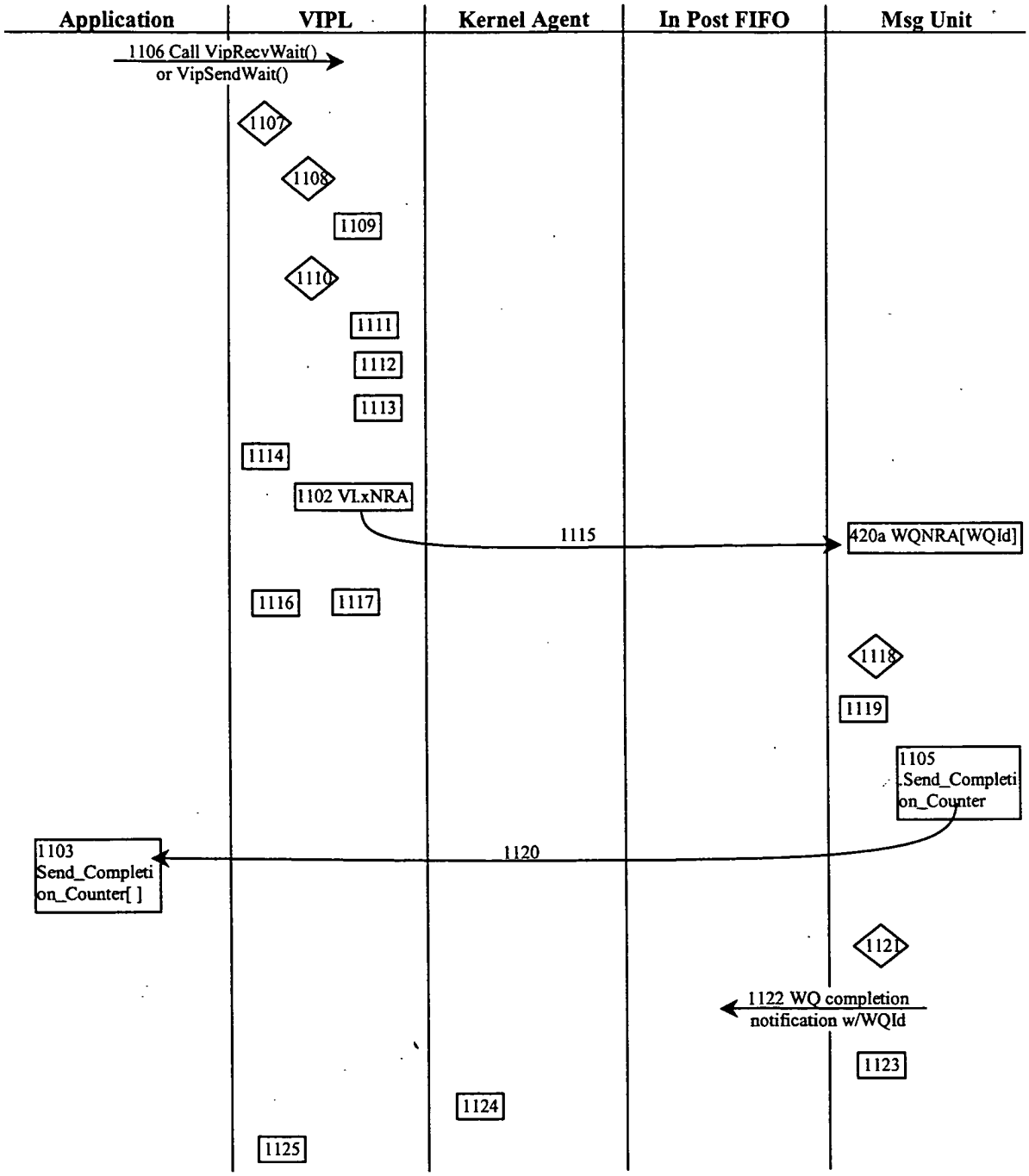
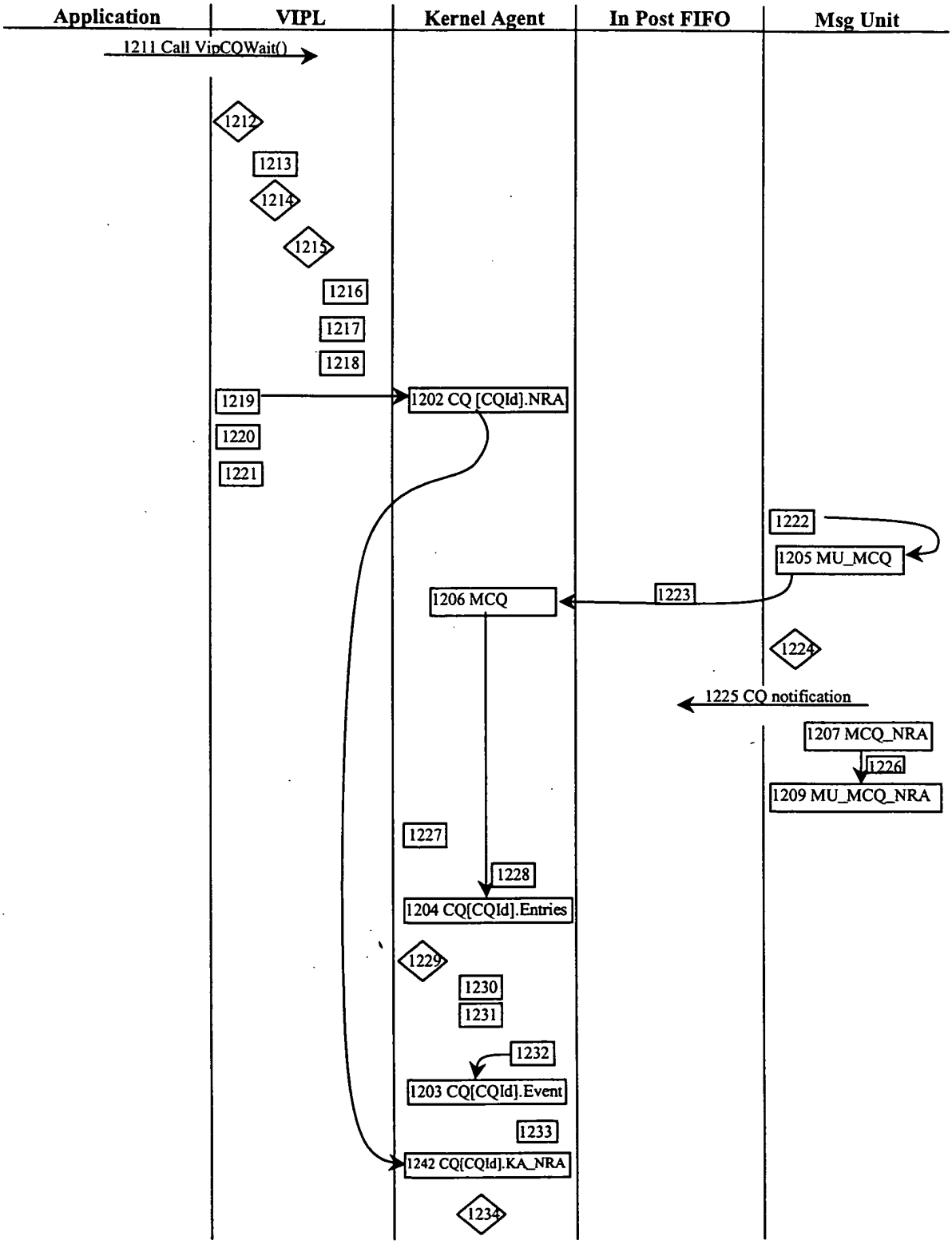


Fig. 12.1

Figure 12 – Completion Queue Completion Notification Message Flows



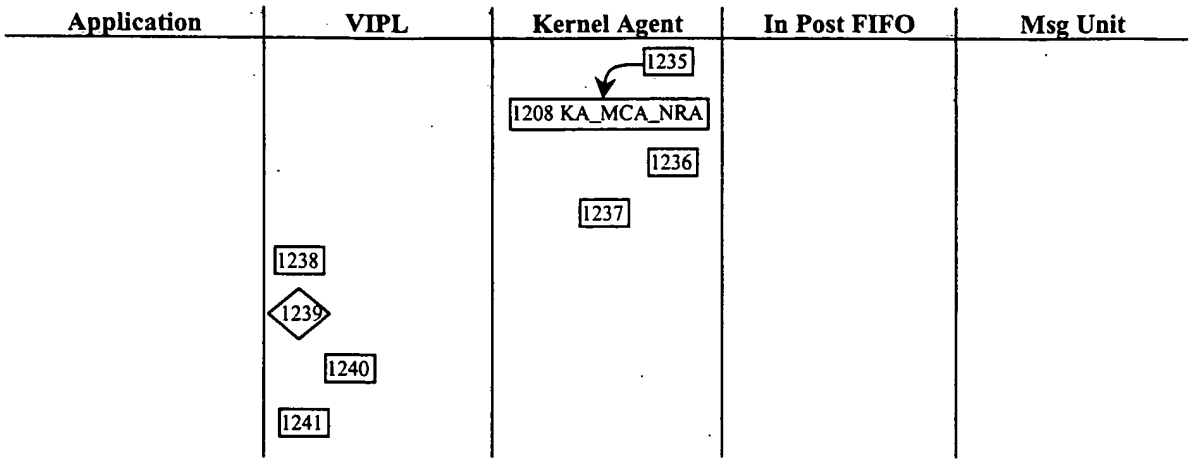

Application
VIPL
Kernel Agent
In Post FIFO
Msg Unit
1235
1208 KA_MCA_NRA
1236
1237
1238
1239
1240
1241

Fig. 12.2

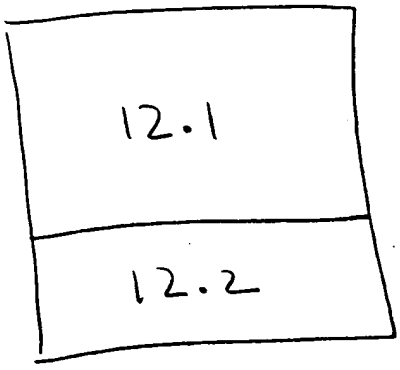

12.1
12.2

Figure 13 – Memory Deregistration Message Flows

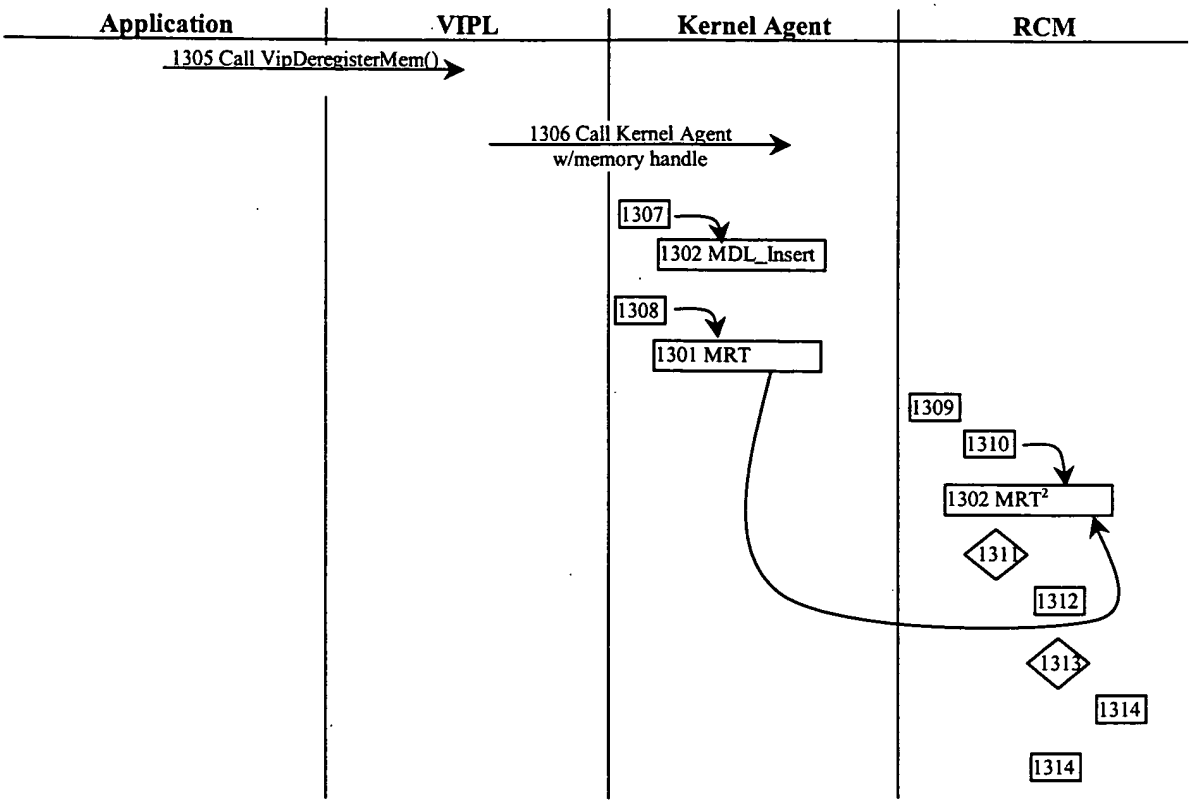


Figure 14 – Vito-FC FCP_CMD IU Updates

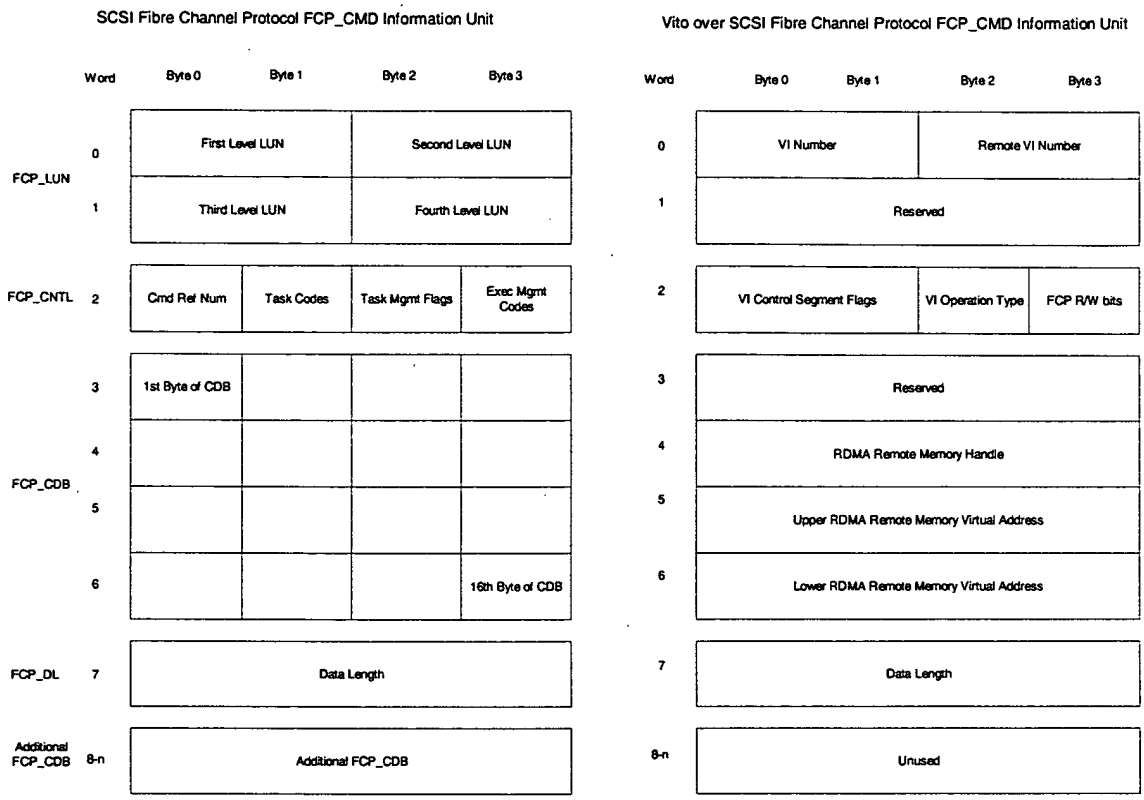


Figure 15 – Vito-FC FCP_RESP IU Updates

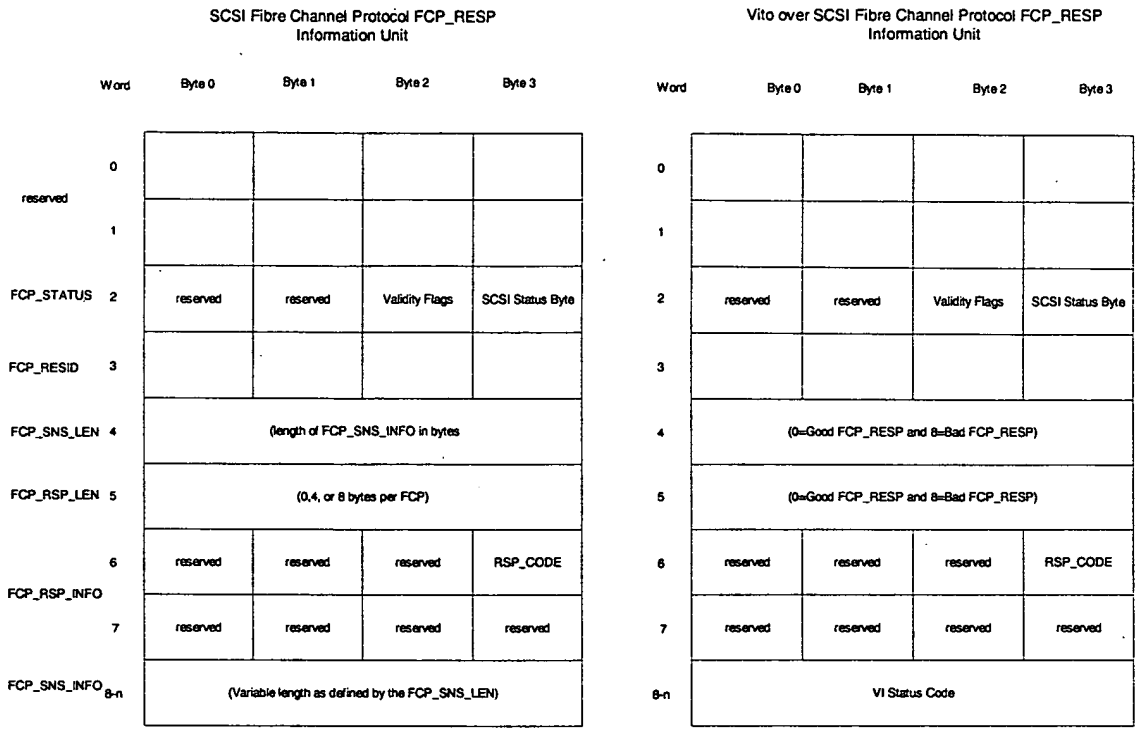


Fig. 16

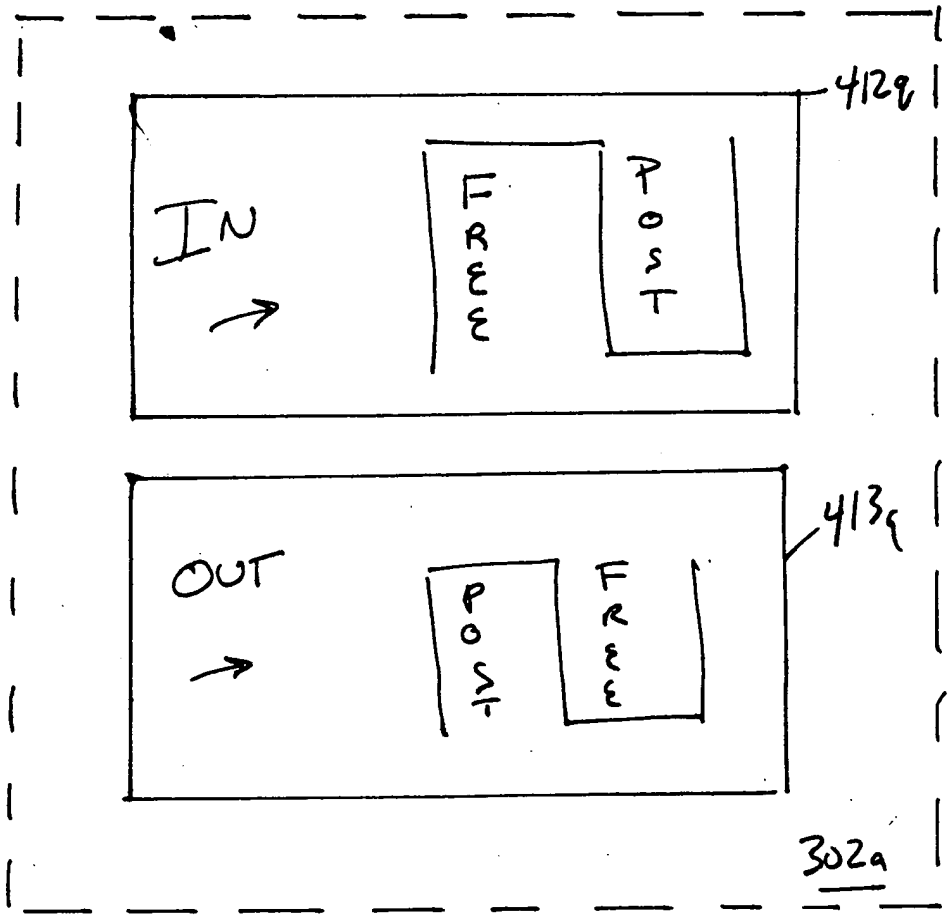


Figure 17

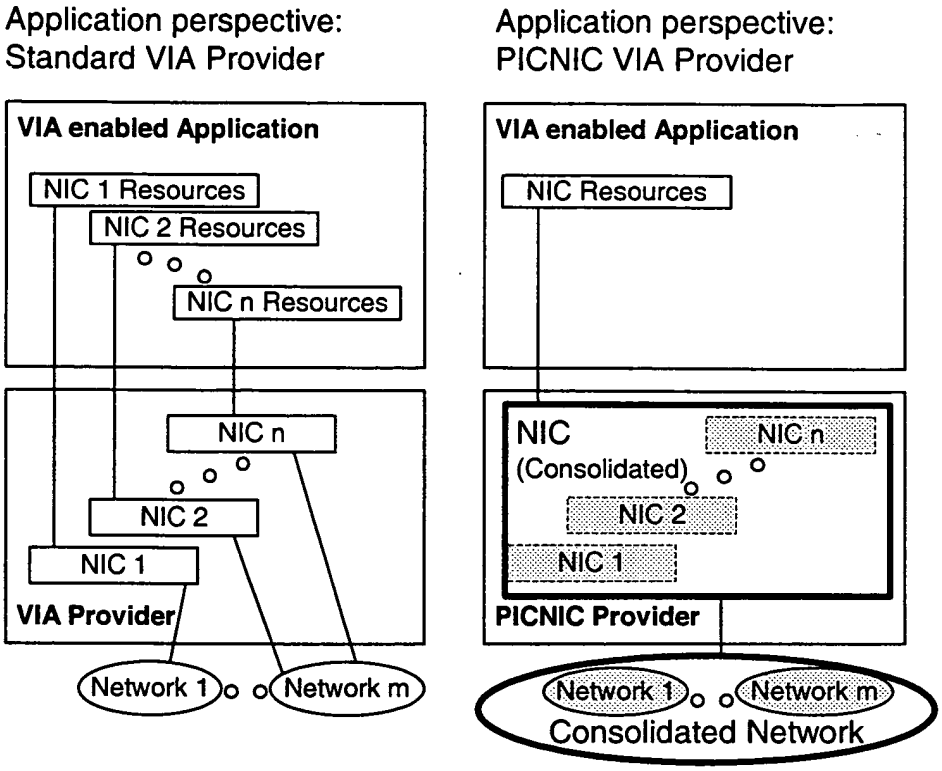

Application perspective:
Standard VIA Provider
VIA enabled Application
NIC 1 Resources
NIC 2 Resources
NIC n Resources
NIC n
NIC 2
NIC 1
VIA Provider
Network 1
Network m
Application perspective:
PICNIC VIA Provider
VIA enabled Application
NIC Resources
NIC
(Consolidated)
NIC n
NIC 2
NIC 1
PICNIC Provider
Network 1
Network m
Consolidated Network

Figure 18 – PICNIC Data Structures

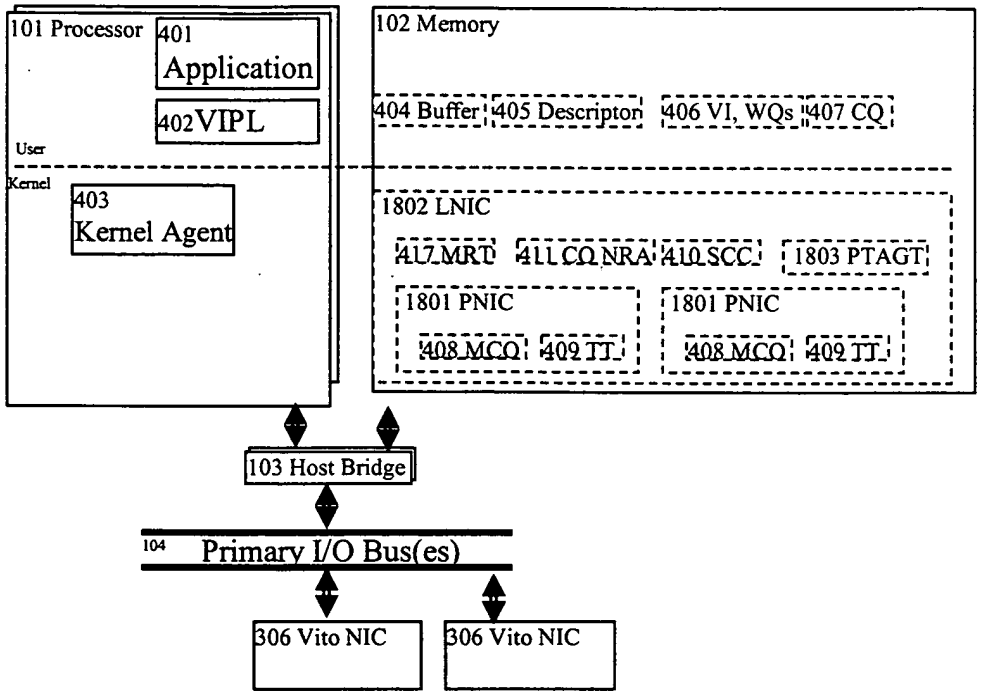


Figure 19 – Possible Link Configurations

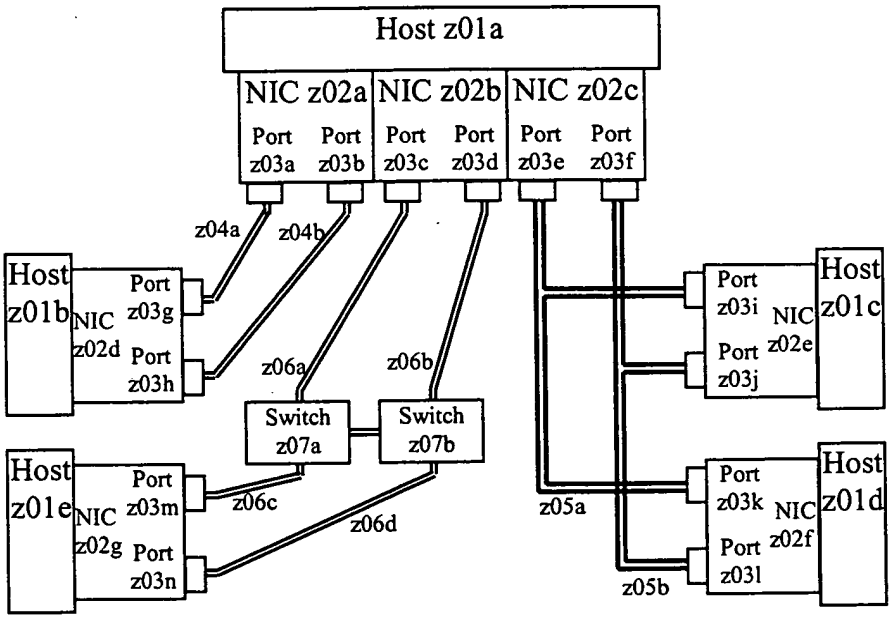


Figure 20 – Example Paths

Host		z01a						z01b		z01c		z01d		z01e	
	Port	z03a	z03b	z03c	z03d	z03e	z03f	z03g	z03h	z03i	z03j	z03k	z03l	z03m	z03n
z01a	z03a	Lb						z04a							
	z03b		Lb						z04b						
	z03c			Lb	z06a; z07a; z07b; z06b									z06a; z07a; z06c	z06a; z07a; z07b; z06d
	z03d			z06b; z07b; z07a; z06a	Lb									z06b; z07b; z07a; z06c	z06b; z07b; z06d
	z03e					Lb				z05a		z05a			
	z03f						Lb				z05b		z05b		
z01b	z03g	z04a						Lb							
	z03h		z04b						Lb						
z01c	z03i					z05a				Lb					
	z03j						z05b				Lb				
z01d	z03k					z05a						Lb			
	z03l						z05b						Lb		
z01e	z03m			z06c; z07a; z06a	z06c; z07a; z07b; z06b									Lb	z06c; z07a; z07b; z06d
	z03n			z06d; z07b; z07a; z06a	z06d; z07b; z06b									z06d; z07b; z07a; z06c	Lb